2. (Twice Amended) A method for predictively assessing one or more characteristics of wood fibre or wood pulp to be produced from a solid wood member, comprising the steps of:

causing a sound wave to be transmitted through the solid wood member;

determining the velocity of the sound wave through the solid wood member; and

comparing the determined sound wave velocity to stored information on at least one fibre characteristic versus sound velocity through the wood-type to determine at least in part said at least one fibre characteristic for wood pulp or wood fibre to be produced from the solid wood member.

3. (Twice amended) A method for predictively assessing one or more characteristics of wood fibre or wood pulp to be produced from a solid wood member having one end and another end longitudinally spaced from the one end along the length of the solid wood member, comprising the steps of:

placing a sensing means capable of detecting sound in the solid wood member in contact with or within sensing distance of one end of the length of the solid wood member;

placing a second sensing means capable of detecting sound in the solid wood member in contact with or within sensing distance of another end of the length of the solid wood member,

causing a sound wave to be transmitted in the length of the solid wood member from one end to the other end;

detecting the sound at each end of the length of the solid wood member via the sensing means and determining the velocity of the transmitted sound in the wood; and

predictively assessing at least one characteristic of wood fibre or wood pulp to be produced from the solid wood member by reference to stored information on at least one fibre characteristic versus sound velocity through the wood.

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4.   (Twice Amended)   A method for predictively assessing one or more characteristics of wood fibre or wood pulp to be produced from a solid wood member having one end and another end longitudinally spaced from the one end along the length of the solid wood member including the steps of:

placing means capable of detecting both an original and a reflected sound wave in contact with or within sensing distance of one end of a length of a solid wood member;

causing a sound wave to be transmitted in the length of the solid wood member;

detecting a reflected echo of the sound wave in the solid wood member;

determining the velocity of the sound wave in the solid wood member; and

predictively assessing at least one characteristic of wood fibre or wood pulp to be produced from the solid wood member at least in part by reference to stored information on at least one fibre characteristic versus sound velocity through the wood.

5.   (Twice Amended)   A method according to claim 1, wherein the solid wood member has a length and at least one end, wherein the step of causing a sound to be transmitted through the solid wood member is caused by impacting one end of the length of the solid wood member.

8.   (Twice Amended)   A method of segregating solid wood members for use in pulp and paper or fibre board production including determining at least one fibre characteristic of individual solid wood members using the method of claim 1.

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9.   (Twice amended)   Apparatus for predictively assessing at least one characteristic of wood fibre or wood pulp to be produced from a solid wood member, comprising:

a sensor capable of detecting the velocity of a sound wave through a solid wood member along the length thereof; and

a computer comprising stored information on at least one fibre characteristic of produced wood fibre or wood pulp versus sound velocity through wood and arranged to determine the at least one fibre characteristic for the wood fibre or wood pulp to be produced by reference to said stored information on the at least one fibre characteristic versus detected velocity through the solid wood member.

10.   (Twice Amended)   Apparatus for predictively assessing at least one characteristic of wood fibre or wood pulp to be produced from a solid wood member, comprising:

a sensor capable of detecting both an original and a reflected sound wave in a solid wood member along the length thereof; and

a computer comprising stored information on fibre characteristics versus sound velocity through wood and arranged to determine the at least one fibre characteristic for the wood fibre or wood pulp to be produced by reference to said stored information on the at least one fibre characteristic versus detected velocity through the solid wood member.

11.   (Twice Amended)   Apparatus according to claim 9 arranged to determine a measure of the average fibre length of wood fibre to be produced from a solid wood member.

12.   (Twice Amended)   Apparatus according to claim 9 arranged to determine a measure of strength of pulp to be produced from a solid wood member.

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13. (Amended) A method according to claim 2, wherein the solid wood member has a length and at least one end, wherein the step of causing a sound wave to be transmitted through the solid wood member is caused by impacting one end of the length of the solid wood member.

16. (Amended) A method according to claim 3 wherein the step of causing a sound wave to be transmitted through the solid wood member is caused by impacting one end of the length of the solid wood member.

19. (Amended) A method according to claim 4 wherein the step of causing a sound wave to be transmitted through the solid wood member is caused by impacting one end of the length of the solid wood member.

25. (Amended) A method of segregating solid wood members for use in pulp and paper or fibre board production including determining at least one fibre characteristic of individual solid wood members using the method of claim 2.

26. (Amended) A method of segregating solid wood members for use in pulp and paper or fibre board production including determining at least one fibre characteristic of individual solid wood members using the method of claim 3.

27. (Amended) A method of segregating solid wood members for use in pulp and paper or fibre board production including determining at least one fibre characteristic of individual solid wood members using the method of claim 4.

28. (Amended) A method of segregating solid wood members for use in pulp and paper or fibre board production including determining at least one fibre characteristic of individual solid wood members using the method of claim 5.

29. (Amended) Apparatus according to claim 10 arranged to determine a measure of the average fibre length of wood fibre to be produced from a solid wood member.